



Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference)

By Walter Oney

Download now

Read Online ➔

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney

The Microsoft Windows driver model (WDM) supports Plug and Play, provides power management capabilities, and expands on the driver/minidriver approach. Written by long-time device-driver expert Walter Oney in cooperation with the Windows kernel team, this book provides extensive practical examples, illustrations, advice, and line-by-line analysis of code samples to clarify real-world driver-programming issues. And it's been updated with the latest details about the driver technologies in Windows XP and Windows 2000, plus more information about how to debug drivers.

Topics covered include:

- Beginning a driver project and the structure of a WDM driver; NEW: Minidrivers and class drivers, driver taxonomy, the WDM development environment and tools, management checklist, driver selection and loading, approved API calls, and driver stacks
- Basic programming techniques; NEW: Safe string functions, memory limits, the Driver Verifier scheme and tags, the kernel handle flag, and the Windows 98 floating-point problem
- Synchronization; NEW: Details about the interrupt request level (IRQL) scheme, along with Windows 98 and Windows Me compatibility
- The I/O request packet (IRP) and I/O control operations; NEW: How to send control operations to other drivers, custom queue implementations, and how to handle and safely cancel IRPs
- Plug and Play for function drivers; NEW: Controller and multifunction devices, monitoring device removal in user mode, Human Interface Devices (HID), including joysticks and other game controllers, minidrivers for non-HID devices, and feature reports
- Reading and writing data, power management, and Windows Management Instrumentation (WMI) NEW: System wakeup, the WMI control for idle detection, and using WMIMOFCK
- Specialized topics and distributing drivers; NEW: USB 2.0, selective suspend, Windows Hardware Quality Lab (WHQL) certification, driver selection and loading, officially approved API calls, and driver stacks

COVERS WINDOWS 98, WINDOWS ME, WINDOWS 2000, AND
WINDOWS XP!

CD-ROM FEATURES:

- A fully searchable electronic copy of the book
- Sample code in Microsoft Visual C++

For customers who purchase an ebook version of this title, instructions for downloading the CD files can be found in the ebook.

 [Download Programming the Microsoft Windows Driver Model \(2n...pdf](#)

 [Read Online Programming the Microsoft Windows Driver Model \(...pdf](#)

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference)

By Walter Oney

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney

The Microsoft Windows driver model (WDM) supports Plug and Play, provides power management capabilities, and expands on the driver/minidriver approach. Written by long-time device-driver expert Walter Oney in cooperation with the Windows kernel team, this book provides extensive practical examples, illustrations, advice, and line-by-line analysis of code samples to clarify real-world driver-programming issues. And it's been updated with the latest details about the driver technologies in Windows XP and Windows 2000, plus more information about how to debug drivers.

Topics covered include:

- Beginning a driver project and the structure of a WDM driver; NEW: Minidrivers and class drivers, driver taxonomy, the WDM development environment and tools, management checklist, driver selection and loading, approved API calls, and driver stacks
- Basic programming techniques; NEW: Safe string functions, memory limits, the Driver Verifier scheme and tags, the kernel handle flag, and the Windows 98 floating-point problem
- Synchronization; NEW: Details about the interrupt request level (IRQL) scheme, along with Windows 98 and Windows Me compatibility
- The I/O request packet (IRP) and I/O control operations; NEW: How to send control operations to other drivers, custom queue implementations, and how to handle and safely cancel IRPs
- Plug and Play for function drivers; NEW: Controller and multifunction devices, monitoring device removal in user mode, Human Interface Devices (HID), including joysticks and other game controllers, minidrivers for non-HID devices, and feature reports
- Reading and writing data, power management, and Windows Management Instrumentation (WMI) NEW: System wakeup, the WMI control for idle detection, and using WMIMOFCK
- Specialized topics and distributing drivers; NEW: USB 2.0, selective suspend, Windows Hardware Quality Lab (WHQL) certification, driver selection and loading, officially approved API calls, and driver stacks

COVERS WINDOWS 98, WINDOWS ME, WINDOWS 2000, AND WINDOWS XP!

CD-ROM FEATURES:

- A fully searchable electronic copy of the book
- Sample code in Microsoft Visual C++

For customers who purchase an ebook version of this title, instructions for downloading the CD files can be found in the ebook.

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney Bibliography

- Sales Rank: #1099507 in Books
- Brand: Brand: Microsoft Press
- Published on: 2002-12-26
- Original language: English
- Number of items: 1
- Dimensions: 9.00" h x 1.50" w x 7.38" l, 2.90 pounds
- Binding: Paperback
- 880 pages



[Download Programming the Microsoft Windows Driver Model \(2n ...pdf](#)



[Read Online Programming the Microsoft Windows Driver Model \(...pdf](#)

Download and Read Free Online Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney

Editorial Review

Amazon.com Review

Written for advanced C/C++ programmers, Walter Oney's *Programming the Microsoft Windows Driver Model* is a technically astute and clearly presented guide to writing custom Windows 2000 device drivers.

The author's command of the details of the new Windows Driver Model (WDM) standard is what makes this book such a clear success. (Because the WDM is rich in kernel and system services, the trick is often knowing how to use what's available rather than doing everything yourself.) The author presents a solid overview of the WDM architecture and breaks down the process of writing custom device drivers into manageable pieces, from the basics of loading device drivers to creating and processing I/O request packets. The book is very good at exposing kernel system calls, design principles, and programming techniques (such as managing synchronization and handling errors). There are also "nerd alerts" that point out extremely technical material.

This book shows you what you'll need to create WDM drivers that cooperate fully with Windows 2000 (and Windows 98). Features like Plug and Play (PnP), Windows power management, and the new Windows Management Instrumentation (WMI) standard get full attention here. There is plenty of sample code (plus a custom Visual C++ AppWizard that generates skeleton code for a default WDM driver) to get you started. Examples for working with the S5933 PCI chip set (and other simple hardware) let you see WDM drivers in action.

The process of writing device drivers certainly has changed from the early days of DOS. But armed with this handy and thorough book, C/C++ programmers can successfully create drivers for custom hardware that take full advantage of all the features of the powerful new WDM standard. --Richard Dragan

Topics covered: Windows Driver Model (WDM) overview and driver structure; kernel mode; physical filter, function and bus drivers; loading device drivers (DDs); driver objects; Windows 98 compatibility; kernel mode programming basics; error handling; memory management; synchronization; interrupt request levels, kernel synchronization objects, I/O request packets (IRPs), completion routines, plug and play (PnP) basics, reading and writing data, direct memory access (DMA) transfers, power management, error logging, watchdog timers, Windows Management Instrumentation (WMI), Universal Serial Bus (USB): bulk transfer and isochronous pipes; installing DDs: INF files, property pages, and Registry keys.

About the Author

Walter Oney has 35 years of experience in systems-level programming and has been teaching Windows device driver classes for 10 years. He was a contributing editor to Microsoft Systems Journal and is a Microsoft MVP. He has written several books, including *Systems Programming for Windows 95* and the first edition of *Programming the Microsoft Windows Driver Model*. In his free time he's a committed jogger, a fan of classical dance, and an amateur oboist. He and his wife, Marty, live in Boston, Massachusetts.

Users Review

From reader reviews:

Yael Whitehead:

This book untitled Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) to be one of several books that best seller in this year, that's because when you read this book you can get a lot of benefit into it. You will easily to buy this specific book in the book retailer or you can order it by means of online. The publisher on this book sells the e-book too. It makes you easier to read this book, since you can read this book in your Mobile phone. So there is no reason to you personally to past this e-book from your list.

Lawrence Scuderi:

Often the book Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) will bring that you the new experience of reading any book. The author style to clarify the idea is very unique. In case you try to find new book to study, this book very suited to you. The book Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) is much recommended to you you just read. You can also get the e-book from your official web site, so you can easier to read the book.

Clarine Davidson:

This Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) is great publication for you because the content which is full of information for you who always deal with world and also have to make decision every minute. This particular book reveal it data accurately using great organize word or we can claim no rambling sentences inside. So if you are read that hurriedly you can have whole facts in it. Doesn't mean it only gives you straight forward sentences but difficult core information with wonderful delivering sentences. Having Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) in your hand like keeping the world in your arm, info in it is not ridiculous a single. We can say that no guide that offer you world throughout ten or fifteen minute right but this book already do that. So , this is good reading book. Hey there Mr. and Mrs. occupied do you still doubt this?

Daniel Watkins:

What is your hobby? Have you heard in which question when you got college students? We believe that that query was given by teacher to the students. Many kinds of hobby, Every individual has different hobby. Therefore you know that little person like reading or as reading through become their hobby. You have to know that reading is very important along with book as to be the thing. Book is important thing to include you knowledge, except your personal teacher or lecturer. You find good news or update in relation to something by book. Numerous books that can you choose to adopt be your object. One of them is Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference).

Download and Read Online Programming the Microsoft Windows

Driver Model (2nd Edition) (Developer Reference) By Walter Oney
#UT5KA8IB3QP

Read Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney for online ebook

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney
Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney books to read online.

Online Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney ebook PDF download

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney Doc

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney Mobipocket

Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney EPub

UT5KA8IB3QP: Programming the Microsoft Windows Driver Model (2nd Edition) (Developer Reference) By Walter Oney